

SRDS Report No. RD-69-22, VOL. ( 2 )

**FINAL REPORT**

Contract No. FA-67-WAI-129

Project No. 197-641-01R

**CLIMATOLOGICAL SUMMARIES**

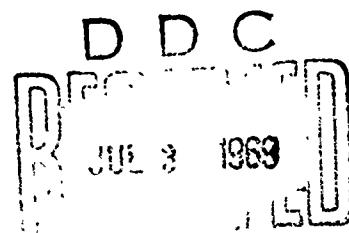
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**VISIBILITIES BELOW 1/2 MILE  
AND CEILINGS BELOW 200 FEET**

**VOLUME 2**

**ATLANTA AIRPORT**

**ATLANTA, GEORGIA**



**JUNE 1969**

This report has been approved for unlimited availability.

**Prepared for**

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
Systems Research & Development Service**

**by**

**U.S. DEPARTMENT OF COMMERCE  
Environmental Science Services Administration  
ENVIRONMENTAL DATA SERVICE  
NATIONAL WEATHER RECORDS CENTER**

**Asheville, N.C.**

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# **FINAL REPORT**

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## **CLIMATOLOGICAL SUMMARIES**

**VISIBILITIES BELOW  $\frac{1}{2}$  MILE  
AND CEILINGS BELOW 200 FEET**

**JUNE 1969**

This report has been prepared by U.S. DEPARTMENT OF COMMERCE, Environmental Science Services Administration, Environmental Data Service, National Weather Records Center, Asheville, N.C. for the Systems Research and Development Service, Federal Aviation Administration, under Contract No. FA-67-WAI-129. The contents of this report reflect the views of the contractor, who is responsible for the facts and the accuracy of the data presented herein, and do not necessarily reflect the official views or policy of the FAA. This report does not constitute a standard, specification or regulation.

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## INTRODUCTION

The tables contained herein have been prepared and organized for use in evaluating the cost/benefits of all weather landing systems and fog dissipation techniques. Thus, the time intervals of duration of the categories of weather are significant in determining the times of the delay, diversion or cancellation of an aircraft flight resulting from a restricted weather category. This information together with the number and types of aircraft affected by the restricted weather and the costs of a delay, diversion or cancellation combine to provide the total costs resulting from the weather restrictions.

Climatological summaries have been prepared for 41 airports. Their location and associated volume numbers are listed in Table A.

## ATLANTA, GEORGIA

## ATLANTA AIRPORT

The Atlanta Municipal Airport is located near the southern tip of the Appalachians at an elevation of about 1005 feet above MSL. The terrain is characterized by wooded, hilly country which slopes downward in all directions except to the north and northwest. The foothills of the Appalachians start about 80 miles to the north. This range produces a foehn effect on air that has had a trajectory from the north and results in rapid dissipation of fog and stratus or post-cold frontal clearing. On the other hand, air with a trajectory from any other quadrant, particularly southeast, is subjected to orographic lifting that is favorable for stratus formation.

The tables in this publication are based on the 10-year period, January 1, 1956-December 31, 1965. Ceilometer measurements of ceiling height began May 17, 1949. Transmissometers (500 ft. baseline) were commissioned on runway 09R December 3, 1965, and on runway 33 June 29, 1965, decommissioned August 30, 1965, then recommissioned (250 ft. baseline) November 14, 1965.

<u>From</u>	<u>To</u>	<u>Lat. N.</u>	<u>Long. W.</u>	<u>Height of Wind Instrument Feet above ground</u>	<u>Station Elevation Feet above MSL</u>
1- 1-56	12-31-61	33° 39'	84° 26'	72	975
1- 1-62	7-31-62	32° 39'	84° 26'	20	975
8- 1-62	12-31-65	33° 39'	84° 26'	20	1005

## NATURE OF DATA

The data used in the preparation of the climatological tables were extracted from 10 years of WBAN 0-A forms from January 1956 through December 1965. There were two exceptions: The data for Dulles International covered the period January 1963 through December 1965 and for Kansas City-Mid-Continent the period July 1957 through December 1965. All data (Record, Special, Local, Check observations)\* were recorded on punched cards to the hour and minute whenever a change occurred in the ceiling, surface visibility, present weather, runway visual range or runway visibility during the time the ceiling was less than 200 feet and/or the surface visibility was less than 1/2 mile. The observation which ended a category of the above conditions was punched and if this observation was not a Record observation, the next Record observation was punched. The elements transcribed were: the time in hours and minutes, ceiling, surface visibility, tower visibility, present weather, temperature, dew-point, surface wind, altimeter setting and remarks concerning runway visual range and runway visibility.

These data should prove to be a valuable source for additional studies where low visibilities are considered.

Runway visual range (RVR) is the operational weather criteria for airport landing systems. The limits of visibility conditions for categories of aircraft operations are presented in Table B. Only Cat. II criteria are currently operational. Because RVR as such, is not available on a uniform basis for the station and period of record under study, visibilities and ceilings were used for delineating categories of weather minimums for landing and take-off operations. The determination of RVR would require:

1. The light setting of the edge lights,
2. the background lighting,
3. the location with respect to runway,
4. a special analyzer to integrate the transmissiometer readings etc.

This information has not often been recorded with the transmissiometer data.

\* Except Kansas City - Mid-Continent. Only Record (hourly) observations were taken during the period of record at this station; 16 hours per day (0700-2200) through November 1957 and 24 hours per day December 1957 through December 1965.

## EXPLANATION OF TABLES

All the tables of climatological summaries except Table I are based on the reported visibilities of less than 1/2 mile and/or ceilings less than 200 feet.

The tables of climatological summaries in these publications include:

- (1) reported visibility and ceiling values versus time intervals of duration.
- (2) weather categories of aircraft landing systems based on their relationship to ceiling and visibility as presented in Table C, versus intervals of duration. This is Table X only.
- (3) percentage frequency of wind direction versus wind speed for each category of aircraft landing system using the relationship of Table C for Record observations only. These are presented for 13 stations only. This is Table XI only.\*
- (4) weather categories of landing systems based on their relationship to ceilings and visibility as presented in Table E, versus intervals of duration. These tables are also summarized on the basis of wind speed and temperature values.

\* These stations are:

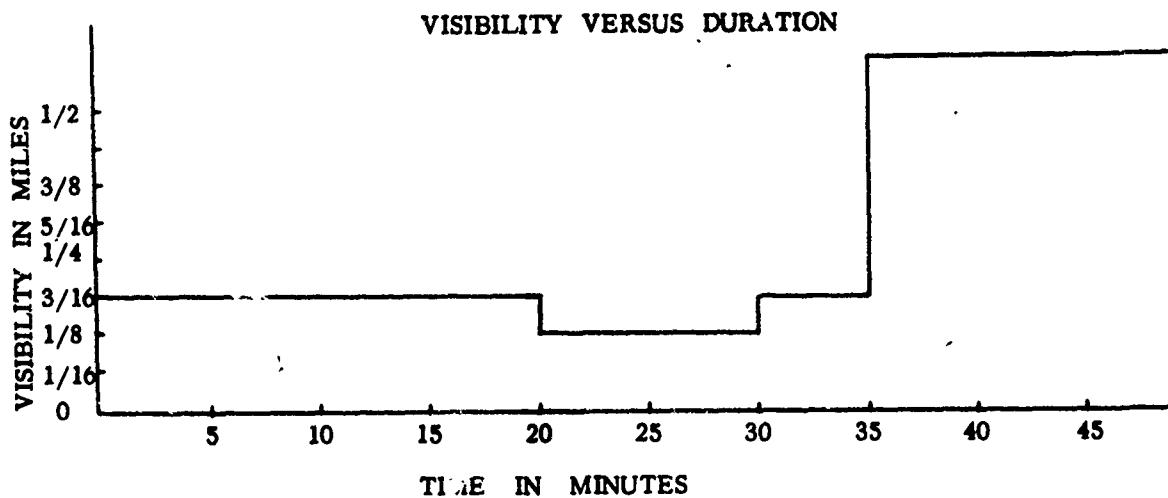
Los Angeles International, Oakland International, Chicago O'Hare, San Francisco International, Greater Buffalo International, Washington National, Washington Dulles International, Atlanta, Newark, New York J. F. K., Philadelphia International, New York La Guardia, Cleveland Hopkins International

### REPORTED VISIBILITY AND CEILING VALUES VERSUS INTERVALS OF DURATION

Nine summaries are presented. In Tables I - V the values represent the individual incidents of specified ceiling and visibility. Thus, in Table III 3/8 mile visibility with 100 ft. ceiling occurs with a specific frequency for each interval of duration.

In Tables VI to IX, the frequency of occurrence represents visibilities for specific conditions of ceilings at or below the listed visibility. They are cumulative incidents wherein the total time at or below a certain visibility value for the ceiling value specified is considered as one incident. Thus, if in Table VII there are 172 incidents of 3/8 mile in the interval of 1-15 minutes, it represents 172 times during the 10-year period that visibilities 3/8 mile or less with ceilings 100 feet.

Another example which combines the entries in the individual and the cumulative tables is as follows: If visibility is distributed as shown in the figure, for ceiling 100 feet, if for 20 minutes the visibility was 3/16 then went to 1/8 for 10 minutes, then went to 3/16 for 5 minutes and then to greater than 1/2 mile visibility in Table III there would be 2 counts for 3/16, one under 16-30 minutes and one under 1-15 minutes; and one count for 1/8 under 1-15 minutes; whereas, in the cumulative table for visibilities at or below a given visibility with 100-foot ceilings - Table VII in the 3/8, 5/16, 1/4 and 3/16 mile categories there would be one count under 31-45 minutes (actually 35 minutes) and one count in 1/8 mile category under 1-15 minutes (actually 10 minutes).



To estimate the total time of occurrence for a particular interval of time for the period of record one multiplies the average of time period by the frequency of occurrence of the specified conditions for this time period. Thus, if visibility of 3/8 mile with ceiling 100 feet (Table III) occurred 14 times between 16-30 minutes, the estimated total time would be  $14 \times 23$  or 322 minutes.

#### WEATHER CATEGORIES OF AIRCRAFT LANDING SYSTEMS VERSUS INTERVALS OF DURATION BASED ON TABLE D

A single table (Table X) based on Table C for the period of record is presented. Table C is based on the current practices relating RVR to meteorological visibilities as shown in Table D.

Table X is in three sections:

Xa. Frequency of occurrence of the landing categories versus the indicated duration intervals:

In this summary Categories II, IIIa, IIIb, and IIIc are represented by the frequency of these conditions occurring during the specified intervals.

In Category II + III the frequency represents the visibilities and ceilings at or below Category II weather, i. e., below 200 feet and/or 1/2 mile for a continuous period of time.

In Category III, the number of occurrences represent the frequency the weather was in Category IIIa and IIIb/c i.e., observation below 1/4 mile and equal to and above 1/4 mile when the ceiling is reported as zero for a continuous period of time.

Xb. Total time in each duration versus the duration intervals in hours and tenths of hours. The entries in this table are arrived by adding the times in minutes associated with the frequencies above. These totals are converted to hours and tenths. This table also contains the percentage of time for the 10-year period of observations of specified duration intervals, i. e., 1-90, 91-all, 1-all. This table is derived by dividing the total time under each category for the specified duration interval by the total number of hours. Thus the percentage value for Category II + III the 1-all group (last column, 4th value down) represents the frequency of occurrence for the ten-year period in percent of visibility and ceilings below 1/2 mile and/or 200 feet.

Xc. Average time in each duration versus the duration intervals.

This table is derived by dividing the total time in minutes of each item in Table Xb by the frequency of occurrence in Table Xa.

#### WIND DIRECTION VERSUS SPEED BY PERCENTAGE FREQUENCY (Table XI)

Table XI (for 13 stations) (unnumbered on summaries) show the percentage distribution of the different categories in accordance with Table D by wind direction to 16 points versus specified speed intervals. These categories, II, IIIa and IIIb/c, are divided into 2100-0500 and 0600-2000 hour groups making a total of six sub-tables.

Only the hourly (Record) observations when Category II or below conditions exist are used in these summaries. The percentages are determined by dividing the number of hourly observations which were recorded during the entire period of record for the indicated hour group. The percentage figures can be combined to obtain percentages for the quadrants of different speed intervals.

#### WEATHER CATEGORIES OF LANDING SYSTEMS VERSUS INTERVALS OF DURATION BASED ON TABLE E

Nine tables XII - XXI are presented for the ten-year period. These tables are presented in three sections:

a. Frequency of occurrences of landing categories versus duration intervals:

Categories II, IIIa, IIIb, and IIIc are represented by the total time for the specified hour group that these conditions occur during the indicated intervals.

In Categories II + III the frequency represents the visibilities and ceilings at or below Category II weather e. g., below 2400 RVR. In Category III the frequency represents the visibilities at or below Category III weather e. g., below 1200 RVR.

b. Total time in each duration versus the duration intervals hours and tenths.

The entries in this table are derived by adding the time in minutes associated with the frequency above and converting them to hours and tenths.

c. Average time in each duration versus the duration intervals.

This table is derived by dividing the total time in minutes of each value in b by the corresponding frequency of occurrence in a.

In these tables, since the period of duration is the important element, each incident of weather is attributed to the hour group during which it began. Thus, if Category IIIa weather began in the 22-06 hour group and continued into the 07-13 hour group the total time is placed in the 22-06 group. It is probable, then, that the incidence of the various categories may be over-estimated in the 22-06 group. The totals appearing in the all hour group, however, are correct.

The sum of Categories IIIa, IIIb, and IIIc in the all-hour groups and sometimes in the other hour groups are frequently greater than under Cat. III. This results from the addition of 5% of observations of 3/16 mile or greater with ceiling 100 feet added to Cat. IIIa, whereas, this 5% is not included in the Cat. III totals at the bottom of each table.

The difference between Cat. III totals and the sum of Cat. IIIa, IIIb, and IIIc are subtracted from the Cat. II totals for the all-hour group and appears at the end of the Cat. II line with an asterisk. This value is a better estimate of the occurrence of Cat. II weather for the 10-year period.

## EXPLANATION OF TABLE E

The relationship of RVR with light setting 5 for a 500' baseline to the meteorological report of visibility, based on the information in Circular N<sup>1/</sup>, is given in Table F. This was the basis for establishing the relationships in Table E. The use of the highest setting for the edge lights for approaches in low visibility is the current operational practice. Although the selection of some of the relationships in Table E have been somewhat arbitrary, it can be expected that the observers report of low visibilities and ceilings will be more inexact than the cut off point of these relationships.

<sup>1/</sup> Manual of Surface Observations (WBAN). Circular N, Weather Bureau, Washington, D. C. NAVAIR 501D505, July 1968 (AD672-366)

## ACKNOWLEDGEMENTS

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This is one of 41 volumes of Report RD-69-22. The volumes are as follows:

<u>VOL.</u>	<u>CITY</u>	<u>AIRPORT</u>
1.	Anchorage, Alaska	International
2.	Atlanta, Georgia	Atlanta
3.	Baltimore, Maryland	Friendship International
4.	Birmingham, Alabama	International
5.	Boston, Massachusetts	General E. L. Logan International
6.	Buffalo, New York	Greater Buffalo International
7.	Burbank, California	Hollywood-Burbank
8.	Chicago, Illinois	O'Hare International
9.	Cincinnati, Ohio	Greater Cincinnati
10.	Cleveland, Ohio	Cleveland-Hopkins International
11.	Columbus, Ohio	Port Columbus International
12.	Dallas, Texas	Love Field
13.	Dayton, Ohio	James M. Cox Municipal
14.	Denver, Colorado	Stapleton International
15.	Detroit, Michigan	Detroit Metropolitan-Wayne County
16.	Hartford, Connecticut	Bradley International (Windsor Locks)
17.	Houston, Texas	William P. Hobby
18.	Indianapolis, Indiana	Weir Cook
19.	Kansas City, Missouri	Mid-Continent International
20.	Los Angeles, California	International
21.	Louisville, Kentucky	Standiford Field
22.	Miami, Florida	International
23.	Milwaukee, Wisconsin	General Mitchell Field
24.	Minneapolis, Minnesota	Minneapolis-St. Paul International
25.	Nashville, Tennessee	Metropolitan
26.	Newark, New Jersey	Newark
27.	New Orleans, Louisiana	International
28.	New York, New York	John F. Kennedy International
29.	New York, New York	La Guardia
30.	Oakland, California	Metropolitan Oakland International
31.	Philadelphia, Pennsylvania	International
32.	Pittsburgh, Pennsylvania	Greater Pittsburgh International
33.	Portland, Oregon	International
34.	Rochester, New York	Rochester-Monroe County
35.	St. Louis, Missouri	Lambert-St. Louis Municipal
36.	Salt Lake City, Utah	Municipal No. 1
37.	San Francisco, California	International
38.	Seattle, Washington	Seattle-Tacoma International
39.	Syracuse, New York	Clarence E. Hancock
40.	Washington, D. C.	Dulles International
41.	Washington, D. C.	National

TABLE A

#### LIMITS OF LANDING CATEGORIES

- \* CAT. II Operations down to minima below 200 feet decision height and 2400 RVR and to as low as 100 feet decision height and 1200 RVR.
- \*\* CAT. IIIA Below 100 feet decision height and 1200 RVR and to as low as 50 feet decision height and 700 RVR.
- \*\* CAT. IIIB Below 700 RVR to 150 RVR.
- \*\* CAT. IIIC No external visual reference.

#### TABLE B

- \* Current operational criteria
- \*\* Criteria not firm, used for planning purposes

CEILING AND VISIBILITY EQUIVALENTS FOR CATEGORIES  
OF AIRCRAFT LANDING OPERATIONS CURRENT PRACTICE  
CRITERIA for Table X and XI

Category II:

Visibility = 1/2 and ceiling = 100

Visibility = 3/8 and ceiling  $\neq$  0

Visibility = 5/16 and ceiling  $\neq$  0

Visibility = 1/4 and ceiling  $\neq$  0

Category III-a:

Visibility = 1/4 and ceiling = 0

Visibility = 3/16 and all ceilings

Visibility = 1/8 and all ceilings

Category III-b/c:

Visibility = 1/16 and all ceilings

Visibility = 0 and all ceilings

Category III:

The sum of IIIa, IIIb, and IIIc

TABLE C

RVR VERSUS VISIBILITY (Current Practice)

METEOROLOGICAL VISIBILITY	RVR EQUIVALENT
Statute Miles (feet)	Feet
3/16 (990 feet)	1200
* 1/4 (1320 feet)	1600
* 1/2 (2640 feet)	2400

TABLE D

\* United States Standard for Terminal Instrument  
Procedures (TERPs), Federal Aviation Agency, September 1966.

CEILING AND VISIBILITY EQUIVALENTS FOR  
CATEGORIES OF AIRCRAFT LANDING OPERATIONS  
Criteria for Tables XII-XXI

Category II

Below 2400 ft. RVR to  
1200 ft. RVR

Equivalent Meteorological Observations

All observations with visibilities greater than  
3/8 mile with ceiling 100 feet.

All observations of 3/8 mile with ceiling not  
equal to zero.

All observations of 5/16 mile with ceiling not  
equal to zero.

All observations of 1/4 mile with ceiling not  
equal to zero.

All observations of 3/16 mile with ceiling not  
equal to zero.

Category III

Category IIIa

Below 1200 ft. RVR to  
700 ft. RVR

All observations of 1/8 mile.

All observations of 3/16 mile or greater with  
zero ceiling.

5% of observations of 3/16 mile or greater with  
ceiling 100.

Category IIIb

Below 700 ft. RVR to  
150 ft. RVR

All observations of 1/16 mile.

50% of all observations of zero miles.

Category IIIc

Below 150 ft. RVR

50% of observations of zero miles.

TABLE E

## RVR VERSUS METEOROLOGICAL VISIBILITY

### Circular N

Reported Meteorological Visibilities Miles (feet)	RVR (500 ft. baseline) at Setting 5		Category
	Day	Night	
0 (less than 330 feet)	*	*	(IIIc and IIIb)
1/16 (330 feet-650 feet)	*	*	(IIIb)
1/8 (660 feet-980 feet)	1000-1400	*	(IIIb and IIIa)
3/16 (990 feet-1310 feet)	1400-1800	1200-1800	(Cat. II)
1/4 (1320 feet-1640 feet)	1800-2200	1800-2200	(Cat. II)

\* No determination of RVR with respect to meteorological visibility.

TABLE F

## ATLANTA, ATLANTA

FREQUENCY OF INTERVALS OF DURATION VERSUS CATEGORIES OF VISIBILITIES JANUARY 1956 - DECEMBER 1965

TABLE I. VISIBILITY  $\geq 1/2$  MILE WHEN CEILING  $< 200$  FEET.

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
289	160	88	63	32	26	11	10	1	2		

TABLE II. (IRRESPECTIVE OF CEILING).

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
3/8	72	59	11	3	2	2	2				
5/16	36	12	6	3	2						
1/4	247	111	72	37	50	27	22	10	2	6	1
3/16	46	26	14	10	8	2	4	1			
1/8	97	67	31	18	26	16	24	13	13		
1/16	12	6	6	7	9	3	6	1	2	2	
0	2	1	4	1	1	3		2	1		

TABLE III. (CEILING 100 FEET).

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
3/8	45	21	3	1	1	1	1				
5/16	17	7	1	2							
1/4	163	78	48	29	34	18	13	7	2	3	
3/16	31	15	9	5	7	2	2	1	1	1	
1/8	36	31	15	11	17	10	14	6	6	1	
1/16	5	2	3	2	2	3		1	1		
0	1	1	1	1							

TABLE IV. (CEILING ZERO).

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
3/8	5	2	2								
5/16	6	2									
1/4	36	11	8	8	9	3	2	1	1	1	
3/16	12	6	2	2	2	2	2	1			
1/8	15	17	12	9	7	4	11	4	2	1	2
1/16	3	3	4	4	1	1	4	1	1		
0	1	2	2	1	1	2		1	1		

TABLE V. (CEILING 100 FEET OR ZERO).

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
3/8	24	6	6	1	2	1	1				
5/16	22	8	2	2	2						
1/4	157	79	53	31	37	21	16	9	2	6	1
3/16	39	20	11	7	7	2	4	1	12	13	
1/8	36	33	22	19	20	14	21	12	13		
1/16	8	5	6	5	3	3	1	2	2	2	
0	2	2	1	1	2	1	2		1		

TOTAL TIME AT OR BELOW EACH VISIBILITY CLASSED AS ONE INCIDENT

TABLE VI. (IRRESPECTIVE OF CEILING).

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
3/8	99	66	55	47	64	44	40	32	33	19	19
5/16	90	56	56	39	67	39	45	27	34	19	18
1/4	76	54	57	38	70	36	45	28	32	21	16
3/16	34	29	32	20	24	20	31	19	20	9	10
1/8	20	26	26	18	16	16	28	19	15	8	9
1/16	9	4	6	6	4	4	2	2	4	1	
0	1	1	4	1	1	3		2	1		

TOTAL TIME AT OR BELOW EACH VISIBILITY CLASSED AS ONE INCIDENT

TABLE VII. (CEILING 100 FEET).

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
3/8	120	70	51	31	41	30	33	19	18	9	9
5/16	107	71	49	26	46	23	35	19	16	9	9
1/4	99	69	50	26	49	20	35	19	15	9	9
3/16	38	31	23	12	19	18	19	7	9	4	4
1/8	31	26	12	11	11	16	16	7	8	3	3
1/16	6	1	2	1	4	3	16	7	2	2	
0	1	1	1	1	1				1		

TOTAL TIME AT OR BELOW EACH VISIBILITY CLASSED AS ONE INCIDENT

TABLE VIII. (CEILING ZERO).

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
3/8	78	55	47	36	42	39	36	27	31	16	15
5/16	69	46	45	33	45	32	35	23	31	16	15
1/4	59	48	46	32	46	30	40	22	31	16	16
3/16	30	25	26	19	30	18	28	15	19	9	10
1/8	24	21	16	19	13	16	23	16	16	8	9
1/16	6	5	3	4	9	3	4	2	2	4	1
0	1	2	1	2	1	2		2	2		

TOTAL TIME AT OR BELOW EACH VISIBILITY CLASSED AS ONE INCIDENT

TABLE IX. (CEILING 100 FEET OR ZERO).

	DURATION IN MINUTES										
	1-15	16-30	31-45	46-60	61-90	91-120	121-150	151-240	241-360	361-480	481+
3/8	70	55	47	36	42	39	36	27	31	16	15
5/16	69	46	45	33	45	32	35	23	31	16	15
1/4	59	48	46	32	46	30	40	22	31	16	16
3/16	30	25	26	19	30	18	28	15	19	9	10
1/8	24	21	16	19	13	16	23	16	16	8	9
1/16	6	5	3	4	9	3	4	2	2	4	1
0	1	2	1	2	1	2		2	2		

TABLE X  
ALL SEASONS

ATLANTA, ATLANTA

ALL HOURS

JANUARY 1956 - DECEMBER 1965

## FREQUENCY OF OCCURRENCE

CATEGORY	TIME IN MINUTES												1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-680	681+				
II	346	217	133	79	113	66	43	21	9	5	5	888	127	1015	
IIIA	77	65	48	27	36	27	29	10	20	2	0	253	97	350	
IIIB/C	11	4	6	6	7	4	7	2	3	4	3	36	20	54	
II + III	177	121	88	62	94	56	63	45	60	27	26	542	255	797	
III	93	51	42	32	36	27	30	16	22	7	11	214	113	327	

## TOTAL TIME IN EACH DURATION HOURS AND TENTHS

CATEGORY	TIME IN MINUTES												1-90	91-ALL	1-ALL	PERCENTAGE
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-680	681+					
II	96.1	87.3	86.0	70.7	139.1	77.5	104.1	74.1	46.4	33.7	46.7	439.2	380.3	819.6	.90 .93 .93	
IIIA	13.2	26.3	31.0	24.7	43.7	46.7	72.2	36.7	97.8	14.2	105.9	138.9	371.5	510.4	.16 .42 .50	
IIIB/C	2.2	1.6	4.3	5.3	8.3	6.7	17.8	6.2	14.5	26.3	21.7	71.1	92.8	.02 .08 .11		
II + III	30.9	40.7	57.4	55.1	116.5	95.1	155.1	157.9	194.5	188.1	323.7	308.5	1114.3	1422.8	.35 1.27 1.62	
III	9.7	20.8	27.4	28.6	43.4	47.4	75.3	55.9	107.2	48.1	139.2	130.0	473.3	603.2	.15 .34 .69	

## AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

CATEGORY	TIME IN MINUTES												1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-680	681+				
II	9.7	24.1	38.8	53.7	73.9	105.7	145.3	211.8	290.0	404.0	560.0	29.7	179.7	48.8	
IIIA	10.2	24.3	38.8	54.9	72.9	103.9	149.4	207.9	293.5	426.0	705.7	32.9	229.8	87.5	
IIIB/C	12.2	24.3	42.8	52.5	71.3	100.0	150.1	185.9	289.0	396.8	383	213.4	103.1		
II + III	10.3	24.1	39.1	53.2	74.6	105.7	147.7	210.6	291.8	418.0	746.9	34.2	262.2	107.1	
III	11.0	24.3	39.1	53.7	72.3	105.4	150.9	209.5	292.4	412.3	759.4	36.4	251.3	110.7	

TOTAL OBSERVATION HOURS 87672

ATLANTA, ATLANTA  
WIND DIRECTION VERSUS SPEED BY PERCENTAGE FREQUENCY  
JANUARY 1966 - DECEMBER 1968

TABLE XI

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR GROUP	WIND DIRECTION	CALM	SPEED (KNOTS)					21+	TOTAL
				1-5	6-10	11-15	16-20	21+		
II	21-05	N	0.2	0.7	0.5	0.5	0.5	0.5	0.5	0.5
		NNE	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
		NE	3.2	2.4	0.5	0.5	0.5	0.5	0.5	0.5
		ENE	3.1	10.2	1.7	0.2	17.2			
		E	6.6	11.6	3.2	0.2	21.1			
		ESE	2.2	5.1	1.9	0.2	8.7			
		SE	3.6	4.6	0.7	0.2	9.0			
		SSE	1.9	1.9	0.7	0.2	4.6			
		S	1.9	1.7	0.5	0.2	3.2			
		SSW	1.9	0.9	0.2	0.2	2.7			
		SW	3.6	2.4	0.5	0.2	6.6			
		WSW	0.2	2.7	0.5	0.2	2.9			
		W	3.2	2.2	0.5	0.2	5.6			
		WW	1.9	0.9	0.7	0.2	2.7			
		WW	1.0	0.2	0.2	0.2	1.2			
		WW	0.5	0.2	0.2	0.2	0.7			
		CALM	3.6	36.9	46.8	10.2	6.5	9.6		
		TOTAL	3.6	36.9	46.8	10.2	6.5	9.6	100.0	
		TOTAL RECORD OBSERVATIONS		412						

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR GROUP	WIND DIRECTION	CALM	SPEED (KNOTS)					21+	TOTAL
				1-5	6-10	11-15	16-20	21+		
II	06-20	N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		NNE	2.2	2.2	0.5	0.5	0.5	0.5	0.5	0.5
		NE	5.7	7.0	4.5	0.2	18.2			
		E	6.7	17.0	5.0	0.2	29.2			
		ESE	3.8	4.1	1.0	0.2	8.9			
		SE	2.6	4.3	1.2	0.2	8.1			
		SSE	1.9	2.2	0.5	0.2	4.1			
		S	2.2	1.9	0.5	0.2	4.5			
		SSW	1.9	0.5	0.2	0.2	2.6			
		SW	1.7	1.9	0.5	0.2	3.9			
		WSW	1.0	0.7	0.2	0.2	2.7			
		W	1.2	0.7	0.2	0.2	2.6			
		WW	0.7	1.6	0.2	0.2	2.6			
		WW	1.0	0.7	0.2	0.2	2.6			
		CALM	6.7	30.6	47.6	13.9	1.2	6.7		
		TOTAL	6.7	30.6	47.6	13.9	1.2	6.7	100.0	
		TOTAL RECORD OBSERVATIONS		410						

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR GROUP	WIND DIRECTION	CALM	SPEED (KNOTS)					21+	TOTAL
				1-5	6-10	11-15	16-20	21+		
IIIA	21-05	N	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.5
		NNE	1.9	1.9	0.5	0.5	0.5	0.5	0.5	0.5
		NE	3.8	4.9	4.2	12.9				
		E	8.4	20.6	1.1	30.6				
		ESE	3.8	2.3	0.8	6.5				
		SE	2.3	4.2	0.5	6.5				
		SSE	2.3	2.3	0.5	6.5				
		S	2.7	1.9	0.5	6.2				
		SSW	1.9	0.8	0.5	2.3				
		SW	1.8	1.9	0.5	2.7				
		WSW	1.9	1.9	0.5	3.0				
		W	3.4	0.4	0.5	3.0				
		WW	1.9	0.6	0.5	2.3				
		WW	1.8	1.9	0.5	2.3				
		CALM	12.9	38.6	42.6	6.1	12.9			
		TOTAL	12.9	38.6	42.6	6.1	12.9			100.0
		TOTAL RECORD OBSERVATIONS		263						

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR GROUP	WIND DIRECTION	CALM	SPEED (KNOTS)					21+	TOTAL
				1-5	6-10	11-15	16-20	21+		
IIIA	06-20	N	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4
		NNE	2.9	2.9	0.8	0.8	0.8	0.8	0.8	0.8
		NE	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8
		E	8.3	17.0	0.8	0.8	0.8	0.8	0.8	0.8
		ESE	3.8	7.0	0.8	0.8	0.8	0.8	0.8	0.8
		SE	2.6	1.2	0.8	0.8	0.8	0.8	0.8	0.8
		SSE	1.2	0.4	0.8	0.8	0.8	0.8	0.8	0.8
		S	1.7	1.9	0.5	0.5	0.5	0.5	0.5	0.5
		SSW	0.8	1.2	0.5	0.5	0.5	0.5	0.5	0.5
		SW	1.7	1.7	0.5	0.5	0.5	0.5	0.5	0.5
		WSW	1.2	0.8	0.5	0.5	0.5	0.5	0.5	0.5
		W	2.6	0.8	0.5	0.5	0.5	0.5	0.5	0.5
		WW	1.2	0.4	0.5	0.5	0.5	0.5	0.5	0.5
		WW	1.2	0.4	0.5	0.5	0.5	0.5	0.5	0.5
		CALM	7.4	31.4	49.6	11.2	0.6	7.4		
		TOTAL	7.4	31.4	49.6	11.2	0.6	7.4		100.0
		TOTAL RECORD OBSERVATIONS		242						

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR GROUP	WIND DIRECTION	CALM	SPEED (KNOTS)					21+	TOTAL
				1-5	6-10	11-15	16-20	21+		
IIIB/C	21-05	N	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5
		NNE	4.7	6.7	0.5	0.5	0.5	0.5	0.5	0.5
		NE	9.3	11.6	2.3	23.3				
		E	6.6	22.3	0.5	2.3				
		ESE	4.7	4.7	0.5	4.7				
		SE	2.3	2.3	0.5	4.7				
		SSE	4.7	4.7	0.5	4.7				
		S	2.3	2.3	0.5	4.7				
		SSW	2.3	2.3	0.5	4.7				
		SW	2.3	2.3	0.5	4.7				
		WSW	2.3	2.3	0.5	4.7				
		W	7.0	7.0	0.5	4.7				
		WW	4.7	4.7	0.5	4.7				
		WW	2.3	2.3	0.5	4.7				
		CALM	29.6	44.2	27.9	2.3	29.6			
		TOTAL	29.6	44.2	27.9	2.3	29.6			100.0
		TOTAL RECORD OBSERVATIONS		43						

PERCENTAGE FREQUENCY OF OCCURRENCE

CATEGORY	HOUR GROUP	WIND DIRECTION	CALM	SPEED (KNOTS)					21+	TOTAL
				1-5	6-10	11-15	16-20	21+		
IIIB/C	06-20	N	2.0	2.0	0.5	0.5	0.5	0.5	0.5	0.5
		NNE	5.1	5.1						

TABLE XII - ALL CONDITIONS.

ATLANTA, ATLANTA

0700 - 1900 (25971 OBSERVATION HOURS)

JANUARY 1956 - DECEMBER 1965

## FREQUENCY OF OCCURRENCE

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	119	97	32	20	40	11	8	4	3	2	266	28	292	
IIIA	23	19	16	10	11	8	9	3	2	1	91	23	104	
IIIB	4	2	4	2	2	2					14	3	17	
IIIC	93	25	20	10	19	15	13	8	6	3	3	127	48	175
III	16	12	10	11	11	7	9	3	1	1	60	21	81	

## TOTAL TIME IN EACH DURATION HOURS AND TENTHS

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	18.6	22.5	21.9	17.8	30.2	18.6	19.0	19.3	14.9	13.4	130.9	78.4	209.3	
IIIA	4.5	7.3	10.4	9.0	19.0	13.7	21.0	10.4	9.7	8.7	44.2	57.3	93.2	
IIIB	0.8	2.8	1.7	2.0	3.5						1.8	9.9	20.3	
IIIC	9.7	10.0	15.7	8.5	23.8	26.2	32.4	27.3	27.1	20.5	39.1	65.7	172.4	258.0
III	3.1	4.6	6.6	9.7	12.9	11.9	21.4	10.2	4.9	6.9	36.0	55.4	92.2	

## AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	9.7	23.7	41.0	33.4	75.3	101.6	141.5	198.8	285.7	400.5	29.8	160.0	43.0	
IIIA	10.8	23.0	39.0	32.9	70.7	102.4	140.1	207.3	291.0	401.0	32.7	149.3	53.6	
IIIB	12.0	25.0	42.3	31.0	78.5	105.9					37.6	198.7	71.5	
IIIC	38.0				97.0	148.0					38.0	195.0	132.1	
III	11.7	23.0	39.4	32.7	70.3	102.1	142.9	204.7	294.0	411.0	36.8	150.2	68.3	

1400 - 2100 (29224 OBSERVATION HOURS)

## FREQUENCY OF OCCURRENCE

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	49	19	12	11	26	8	6	6	9	2	113	29	136	
IIIA	7	9	4	1	5	4	7	3	5	1	5	26	29	31
IIIB	3	1									9			
IIIC	38	12	6	7	14	5	7	10	5	1	2	2	2	
III	5	12	6	7	14	2	6	2	4	1	10	27	44	121

## TOTAL TIME IN EACH DURATION HOURS AND TENTHS

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	7.5	7.7	7.3	9.8	31.1	10.5	14.7	21.8	14.6	14.6	21.0	63.4	97.0	180.4
IIIA	1.0	3.7	2.7	0.9	6.3	7.2	10.6	10.7	27.2	7.0	94.4	14.6	110.2	118.1
IIIB	0.6	0.6			1.0						2.0			2.0
IIIC	6.5	6.8	3.7	6.4	16.8	8.9	17.7	37.5	22.0	4.5	6.4	139.0	38.1	108.0
III	6.6	2.8	1.5	9.1	3.9	14.4	7.1	22.6	7.2	66.8	10.0	123.7	131.6	

## AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	10.0	24.2	36.3	33.6	71.8	104.8	148.8	218.0	292.7	433.0	428.9	33.7	232.8	69.7
IIIA	8.6	24.7	40.0	55.0	78.0	108.0	142.0	213.0	326.8	417.0	633.0	33.6	278.8	139.0
IIIB	12.0	22.0			61.0						23.8			
IIIC	10.2	23.9	37.0	54.6	71.9	106.6	151.6	223.9	267.0	381.0	324.0	324.0	324.0	324.0
III	7.0	24.1	44.0	76.3	116.0	143.7	212.3	319.8	430.0	801.6	33.2	365.0	207.6	

2200 - 0600 (12877 OBSERVATION HOURS)

## FREQUENCY OF OCCURRENCE

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	161	129	88	53	53	28	34	12	3	5	4	484	86	370
IIIA	47	37	25	16	20	11	15	1	12	1	6	145	56	201
IIIB	6	3	4	5	4	1	5	1	2	1	20	10	30	
IIIC	1	1	1	1	1						4	1	9	
III	88	86	62	45	61	34	43	27	29	17	13	338	163	301

## TOTAL TIME IN EACH DURATION HOURS AND TENTHS

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	26.4	52.1	56.3	47.5	66.2	49.4	83.3	41.9	15.9	35.2	34.9	248.4	260.2	508.6
IIIA	8.4	15.2	15.8	14.5	24.9	19.3	38.5	39.4	36.5	6.8	69.4	79.1	216.4	290.4
IIIB	1.1	1.3	2.7	4.4	2.5	1.6	12.6	9.2	10.0	6.7	12.2	34.1	45.0	
IIIC	2.2	0.5	1.3	1.2	1.2	2.6					2.1	2.6	5.2	
III	14.7	32.9	40.0	40.3	78.0	60.1	105.9	93.3	145.9	118.7	149.6	204.8	672.2	876.9

## AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS

## TIME IN MINUTES

CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II	72.1	205	132	86	119	53	48	22	9	9	6	861	139	1000
IIIA	70	65	44	27	37	22	30	15	17	1	10	232	98	347
IIIB	13													

ATLANTA, ATLANTA											
0700 - 1900 (25571 OBSERVATION HOURS)											
JANUARY 1956 - DECEMBER 1968											
FREQUENCY OF OCCURRENCE											
TIME IN MINUTES											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	3	2	1	1	2	1	1	1	1	1	1
IIIA	3	1	1	1	1	1	1	1	1	1	1
IIIB											
IIIC											
III + III	2	2	1	1	1	1	1	1	1	1	1
III	2	2	1	1	1	1	1	1	1	1	1
TOTAL TIME IN EACH DURATION HOURS AND TENTHS											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	.5	.9	2.6	1.0	1.6	2.9					
IIIA	.7	.4	.7	1.0	1.6	2.9					
IIIB											
IIIC											
III + III	.4	.9	.8	3.7	1.6	2.9	3.1				
III	.4	.9	.8	1.0	1.6	2.9	3.1				
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	11.3	26.0	77.0	97.0							
IIIA	13.3	26.0	39.0	62.0	171.0						
IIIB											
IIIC											
III + III	26.0	49.0	74.0	97.0	171.0	186.0					
III	12.5	26.0	49.0	62.0	171.0	186.0					
1400 - 2100 (29224 OBSERVATION HOURS)											
FREQUENCY OF OCCURRENCE											
TIME IN MINUTES											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	1	1	1	1	1	1	1	1	1	1	1
IIIA											
IIIB											
IIIC											
III + III	1	1	1	1	1	1	1	1	1	1	1
III											
TOTAL TIME IN EACH DURATION HOURS AND TENTHS											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II											
IIIA											
IIIB											
IIIC											
III + III											
III											
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
IIIA											
IIIB											
IIIC											
III + III	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0	160.0
III											
2200 - 0600 (32877 OBSERVATION HOURS)											
FREQUENCY OF OCCURRENCE											
TIME IN MINUTES											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	3	1	1	1	1	1	1	1	1	1	1
IIIA	1	1	1	1	1	1	1	1	1	1	1
IIIB											
IIIC											
III + III	1	1	1	1	1	1	1	1	1	1	1
III	1	1	1	1	1	1	1	1	1	1	1
TOTAL TIME IN EACH DURATION HOURS AND TENTHS											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	.5	.5	2.6	1.0	2.4						
IIIA	.7	.6	2.6	1.0	2.4						
IIIB											
IIIC											
III + III	.2	.5	.9	2.4							
III	.2	.5	.9	2.4							
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	9.7	31.0	33.0	142.0	142.0						
IIIA	9.7	31.0	33.0	142.0	142.0						
IIIB											
IIIC											
III + III	10.0	31.0	32.0	142.0							
III	9.7	31.0	32.0	142.0							
ALL											
(87672 OBSERVATION HOURS)											
TIME IN MINUTES											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	7	2	1	2	1	2	2	2	2	2	2
IIIA	3	1	2	1	2	1	2	2	2	2	2
IIIB											
IIIC											
III + III	1	2	1	2	1	2	2	2	2	2	2
III	2	1	1	2	1	2	2	2	2	2	2
TOTAL TIME IN EACH DURATION HOURS AND TENTHS											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	1.2	.9	.5	2.0	1.0	9.0					
IIIA	.7	.4	1.2	1.0	9.4						
IIIB											
IIIC											
III + III	.2	.9	.5	1.7	3.7	1.6	9.0	9.1			
III	.4	.9	.5	1.0	2.9	2.9	9.1				
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS											
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+
II	10.6	26.0	31.0	77.0	97.0	181.0					
IIIA	13.3	26.0	36.0	62.0	161.0						
IIIB											
IIIC											
III + III	10.0	26.0	31.0	50.5	76.0	97.0	181.0	186.0			
III	12.5	33.0	33.0	62.0	171.0	186.0					

ATLANTA, ATLANTA 0700 - 1300 (29871 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965															
FREQUENCY OF OCCURRENCE		TIME IN MINUTES													
CATEGORY		1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL
II															
IIIA	3							1					4	1	3
IIIB													3		
IIIC															
II + III	1							2					4	1	3
III	2							1					4		4
TOTAL TIME IN EACH DURATION HOURS AND TENTHS															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	.8							1.6					.8	1.6	2.4
IIIB	.7							1.0	1.2				2.0		2.0
IIIC															
II + III	.1							.8	2.4	1.6			3.3	1.0	5.0
III	.4							1.0	1.2	1.6			2.6		2.6
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	11.3							97.0					11.3	97.0	28.4
IIIB	13.3							60.0	70.0				34.0		34.0
IIIC															
II + III	6.0							49.0	72.5	97.0			50.0	97.0	39.4
III	12.5							60.0	70.0				38.0		38.0
1400 - 2100 (29224 OBSERVATION HOURS)															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	2							1					2		2
IIIB													1		1
IIIC															
II + III	2												2		2
TOTAL TIME IN EACH DURATION HOURS AND TENTHS															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	.9							4					.9		.9
IIIB	.4												.4		.4
IIIC															
II + III	.9												.9		.9
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	25.3							26.0					25.3		25.3
IIIB	26.0												26.0		26.0
IIIC															
II + III	29.3												29.3		29.3
2200 - 0600 (32877 OBSERVATION HOURS)															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	2							1					1		1
IIIB															
IIIC															
II + III	1							1					2		2
III	1												1		1
TOTAL TIME IN EACH DURATION HOURS AND TENTHS															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	.3							.3					.4		.4
IIIB	.6												.6		.6
IIIC															
II + III	.5							.9					1.4		1.4
III	.6												.6		.6
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	9.3							31.0					16.7		16.7
IIIB	33.0												33.0		33.0
IIIC															
II + III	31.0							52.0					41.5		41.5
III	33.0												33.0		33.0
ALL (87672 OBSERVATION HOURS)															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	6	2	1	1	1	1	1	1	1	1	1		9	3	10
IIIB	3	1	1	1	1	1	1	1	1	1	1		7		7
IIIC															
II + III	1	2	1	1	2	1	1	1	1	1	1		8	1	9
III	2	1	1	1	1	1	1	1	1	1	1		5		5
TOTAL TIME IN EACH DURATION HOURS AND TENTHS															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	1.1	.9	.9					1.6					2.6	1.6	4.1
IIIB	.7	.4	.6					1.0	1.2				3.9		3.9
IIIC															
II + III	.1	.9	.9	1.7	2.4	1.6							3.6	1.6	7.2
III	.4	.6	.6	1.0	1.2								3.1		3.1
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS															
CATEGORY		TIME IN MINUTES													
II	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+		1-90	91-ALL	1-ALL
IIIA	10.7	23.5	22.0					97.0					16.2	97.0	24.3
IIIB	19.3	26.0	33.0	30.0	30.0	70.0							33.1		33.1
IIIC															
II + III	6.0	29.3	31.0	30.5	32.5	97.0							41.5	97.0	47.9
III	12.9	33.0	30.0	30.0	30.0	70.0							37.0		37.0



ATLANTA, ATLANTA											
0700 - 1300 (25971 OBSERVATION HOURS)											
JANUARY 1956 - DECEMBER 1965											
TIME IN MINUTES											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	2			1		1				3	
IIIA		1		1		1			2	1	3
IIIB											
IIIC											
II + III		2			1				2	1	3
III		1		1					1	1	2
TOTAL TIME IN EACH DURATION HOURS AND TENTHS											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	.4			1.2					1.5		1.5
IIIA		.7		1.0		2.9			1.7	2.9	4.9
IIIB											
IIIC											
II + III		2.3			3.1				2.3	3.1	3.4
III	1.0			2.9					1.0	2.9	3.9
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	10.5			29.0		62.0		171.0		30.0	
IIIA		39.0		62.0					50.5	171.0	90.7
IIIB											
IIIC											
II + III		68.5			186.0				68.5	186.0	107.7
III	62.0			171.0					62.0	171.0	116.9
1400 - 2100 (29224 OBSERVATION HOURS)											

NO OCCURRENCE OF DATA

2200 - 0600 (32877 OBSERVATION HOURS)											
TIME IN MINUTES											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	1								1		1
IIIA											
IIIB											
IIIC											
II + III	1								1		1
III											
TOTAL TIME IN EACH DURATION HOURS AND TENTHS											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	.2								.2		.2
IIIA											
IIIB											
IIIC											
II + III	.2								.2		.2
III											
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	10.0								10.0		10.0
IIIA											
IIIB											
IIIC											
II + III	10.0								10.0		10.0
III											
FREQUENCY OF OCCURRENCE											
ALL											
(87672 OBSERVATION HOURS)											
TIME IN MINUTES											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	3			1		1			4		4
IIIA		1		1		1			2	1	3
IIIB											
IIIC											
II + III	1			2		1			3	1	4
III		1		1		1			1	1	2
TOTAL TIME IN EACH DURATION HOURS AND TENTHS											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	.5			1.2					1.7		1.7
IIIA		.7		1.0		2.9			1.7	2.9	4.9
IIIB											
IIIC											
II + III	.2			2.3		3.1			2.5	3.1	5.6
III		1.0		2.9					1.0	2.9	3.9
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS											
CATEGORY 1-15 16-30 31-45 46-60 61-90 91-120 121-180 181-240 241-360 361-480 481+ 1-90 91-ALL 1-ALL											
II	10.3			27.0					25.0		25.0
IIIA		39.0		62.0		171.0			50.5	171.0	90.7
IIIB											
IIIC											
II + III	10.0			68.5		186.0			49.0	186.0	83.3
III		62.0		171.0					62.0	171.0	116.9

ATLANTA, ATLANTA  
TABLE XVII - TEMPERATURE < 29 DEGREES (F), WITH '00, NO PRECIPITATION, AND WIND < 9 KNOTS,  
0700 - 1300 (23871 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965

FREQUENCY OF OCCURRENCE		TIME IN MINUTES											
CATEGORY	1-15 16-30 31-45 46-60 61-90 91-120 121-150 151-180 181-210 211-240 241-260 261-400	481+	1-90	91-ALL	1-ALL	2	2	2	2	2	2	2	2
II	2												
IIIA		1	1										
IIIB													
IIIC													
II + III	1												
III		1	1										
TOTAL TIME IN EACH DURATION HOURS AND TENTHS		TIME IN MINUTES											
CATEGORY	1-15 16-30 31-45 46-60 61-90 91-120 121-150 151-180 181-210 211-240 241-260 261-400	481+	1-90	91-ALL	1-ALL	2	2	2	2	2	2	2	2
II	.4												
IIIA		1.0	1.2										
IIIB													
IIIC													
II + III	.1												
III		1.0	1.2										
AVERAGE TIME IN EACH DURATION HOURS AND TENTHS		TIME IN MINUTES											
CATEGORY	1-15 16-30 31-45 46-60 61-90 91-120 121-150 151-180 181-210 211-240 241-260 261-400	481+	1-90	91-ALL	1-ALL	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
II	10.3												
IIIA		60.0	70.0										
IIIB													
IIIC													
II + III	6.0												
III		60.0	72.5										
1400 - 2100 (29224 OBSERVATION HOURS)													

NO OCCURRENCE OF DATA

2200 - 0600 (32877 OBSERVATION HOURS)

NO OCCURRENCE OF DATA

FREQUENCY OF OCCURRENCE		ALL (07872 OBSERVATION HOURS)											
CATEGORY	1-15 16-30 31-45 46-60 61-90 91-120 121-150 151-180 181-210 211-240 241-260 261-400	481+	1-90	91-ALL	1-ALL	2	2	2	2	2	2	2	2
II	2												
IIIA		1	1										
IIIB													
IIIC													
II + III	1												
III		1	1										
TOTAL TIME IN EACH DURATION HOURS AND TENTHS		TIME IN MINUTES											
CATEGORY	1-15 16-30 31-45 46-60 61-90 91-120 121-150 151-180 181-210 211-240 241-260 261-400	481+	1-90	91-ALL	1-ALL	.4	.4	.4	.4	.4	.4	.4	.4
II	.4												
IIIA		1.0	1.2										
IIIB													
IIIC													
II + III	.1												
III		1.0	1.2										
AVERAGE TIME IN EACH DURATION HOURS AND TENTHS		TIME IN MINUTES											
CATEGORY	1-15 16-30 31-45 46-60 61-90 91-120 121-150 151-180 181-210 211-240 241-260 261-400	481+	1-90	91-ALL	1-ALL	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
II	10.3												
IIIA		60.0	70.0										
IIIB													
IIIC													
II + III	6.0												
III		60.0	72.5										

ATLANTA, ATLANTA										
0700 - 1800 (25571 OBSERVATION HOURS)										
JANUARY 1958 - DECEMBER 1965										
FREQUENCY OF OCCURRENCE										
TIME IN MINUTES										
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480
II										
IIIA	1	1								
IIIB										
IIIC										
II + III	1	1								
III	1	1								
TOTAL TIME IN EACH DURATION HOURS AND TENTHS										
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480
II										
IIIA	.2	.3								
IIIB										
IIIC										
II + III	.2	.3								
III	.2	.3								
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS										
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480
II										
IIIA	11.0	30.0								
IIIB										
IIIC										
II + III	11.0	30.0								
III	11.0	30.0								
1400 - 2100 (29224 OBSERVATION HOURS)										

NO OCCURRENCE OF DATA

2200 - 0600 (32877 OBSERVATION HOURS)

NO OCCURRENCE OF DATA

ALL										
(87672 OBSERVATION HOURS)										
TIME IN MINUTES										
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480
II										
IIIA	1	1								
IIIB										
IIIC										
II + III	1	1								
III	1	1								
TOTAL TIME IN EACH DURATION HOURS AND TENTHS										
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480
II										
IIIA	.2	.3								
IIIB										
IIIC										
II + III	.2	.3								
III	.2	.3								
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS										
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480
II										
IIIA	11.0	30.0								
IIIB										
IIIC										
II + III	11.0	30.0								
III	11.0	30.0								

TABLE XIX - TEMPERATURE > 32 DEGREES (F.)  
ATLANTA, ATLANTA  
0700 - 1300 (25871 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965

FREQUENCY OF OCCURRENCE

CATEGORY	TIME IN MINUTES												481+	1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	481+				
II	111	56	33	20	37	10	8	4	3	2	2	287	27	244		
IIIA	23	19	16	10	10	8	8	3	2	1	1	78	22	100		
IIIB	4	2	4	2	2	2	1	1	1	1	1	14	3	17		
IIIC												1	3	6		
II + III	53	26	20	9	16	14	13	8	9	3	3	122	46	168		
III	14	12	10	11	10	7	8	3	1	1	1	97	20	77		

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

CATEGORY	TIME IN MINUTES												481+	1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	481+				
II	17.9	22.1	22.6	17.8	46.6	17.0	16.9	13.3	16.3	13.6	126.8	76.8	203.9			
IIIA	4.1	7.3	10.4	9.0	11.9	13.7	10.2	10.4	9.7	6.7	42.7	36.5	86.9			
IIIB	1.6	1.8	2.8	1.7	2.6	3.9	1.6	2.4	3.7	6.4	8.8	9.9	20.3			
IIIC												1.6	9.8	8.6		
II + III	9.7	9.6	13.7	7.7	20.1	24.5	32.4	28.0	22.6	20.5	39.1	60.7	167.2	227.9		
III	2.7	4.6	6.6	9.7	11.9	11.9	18.8	10.2	6.9	6.9	35.4	32.8	87.9			

AVERAGE TIME IN EACH DURATION HOURS AND TENTHS

CATEGORY	TIME IN MINUTES												481+	1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	481+				
II	9.6	23.7	41.1	33.4	75.3	102.1	141.5	198.8	285.7	400.5	29.6	170.6	43.0			
IIIA	10.7	23.0	39.0	53.9	71.6	102.4	138.3	207.3	291.0	401.0	32.0	149.5	93.3			
IIIB	12.0	25.0	42.3	51.0	78.5	105.9					37.6	198.7	71.5			
IIIC											38.0	195.0	132.2			
II + III	11.0	24.0	41.1	51.1	73.2	105.1	149.3	209.9	273.8	409.3	781.3	29.9	218.1	91.5		
III	11.6	23.0	39.4	52.7	71.1	102.1	139.4	204.7	298.0	411.0	37.2	157.6	68.5			

1400 - 2100 (29224 OBSERVATION HOURS)

CATEGORY	TIME IN MINUTES												481+	1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	481+				
II	45	19	32	12	11	28	6	5	6	3	2	113	24	137		
IIIA	7	9	4	1	5	4	7	3	5	1	5	26	23	31		
IIIB	3	1										3		5		
IIIC												2	2			
II + III	38	12	6	7	14	5	8	10	5	7	10	77	43	120		
III	5	7	2				2	8	2	4	1	9	16	38		

TOTAL TIME IN EACH DURATION HOURS AND TENTHS

CATEGORY	TIME IN MINUTES												481+	1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	481+				
II	7.5	7.7	7.3	9.8	31.1	10.5	12.0	21.6	14.6	19.4	21.0	63.4	94.3	157.7		
IIIA	1.0	3.7	2.7	0.9	6.3	7.2	16.5	10.7	27.2	7.0	56.4	14.6	116.5	117.9		
IIIB	1.6	1.6									2.0		2.0		2.0	
IIIC											4.3	6.4	10.8	10.8	10.8	
II + III	6.5	4.8	3.7	6.4	16.8	8.9	18.0	37.3	22.0	48.9	135.0	38.1	267.1	305.2		
III	0.6	2.8	1.5	5.1	3.9	14.4	7.1	22.4	7.2	66.8	10.0	121.7	191.2			

AVERAGE TIME IN EACH DURATION HOURS AND TENTHS

CATEGORY	TIME IN MINUTES												481+	1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	481+				
II	10.0	24.2	36.3	53.6	71.8	104.8	142.2	218.0	292.7	433.0	428.5	33.7	238.8	69.1		
IIIA	0.6	24.7	40.0	55.0	76.0	108.0	141.6	213.0	326.8	417.0	433.0	33.6	279.5	136.7		
IIIB	12.0	22.0									23.6		23.6		23.6	
IIIC											267.0	381.0	324.0	324.0	324.0	
II + III	10.2	23.9	37.0	54.6	71.9	106.6	150.2	223.9	303.6	419.0	810.2	29.7	372.7	152.2		
III	7.0	24.1	44.0	56.5	76.5	116.0	143.7	212.5	335.8	430.0	801.6	33.2	365.0	207.0		

2200 - 0600 (32877 OBSERVATION HOURS)

CATEGORY	TIME IN MINUTES												481+	1-90	91-ALL	1-ALL
	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	481+				
II	23.9	32.1	33.7	47.5	66.2	49.6	81.0	41.9	19.9	35.2	36.9	247.4	257.6	320.4		
IIIA	8.1	15.2	19.2	14.9	26.9	19.3	36.5	30.9	36.5	6.8	65.4</td					

TABLE XX - TEMPERATURE > 32 DEGREES (F), WITH FOG, NO PRECIPITATION, AND WIND < 9 KNOTS,  
0700 - 1300 (29971 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965

CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	63	36	23	13	17	2	6	3	1		192	8	140			
IIIA	19	13	9	5	8	6	3	1			94	10	64			
IIIB	4	1	6	2	1						12		12			
IIIC			2	1							3	1	4			
II + III	27	18	26	13	13	8	9	1	1		97	19	116			
III	12	9	9	9	8	6	2				47	8	59			
TOTAL TIME IN EACH DURATION HOURS AND TENTHS																
CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	9.9	15.1	15.2	11.5	21.7	3.5	8.7	6.5			73.3	19.6	42.9			
IIIA	3.3	6.8	6.0	4.5	9.7	11.0	6.6	3.6			27.6	20.3	43.8			
IIIB	.9	.9	2.9	1.9	1.3						7.9		8.2			
IIIC			1.3	1.4							2.6	2.4	4.7			
II + III	4.3	7.6	17.3	11.3	16.2	13.8	22.3	9.7	4.9		56.8	46.1	100.9			
III	2.4	3.2	6.4	8.1	9.9	10.0	4.4				30.0	15.3	45.3			
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS																
CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	9.4	25.2	39.6	52.8	76.5	104.0	149.5	193.5			28.9	147.1	36.9			
IIIA	10.5	22.3	39.9	59.8	72.6	109.8	131.3	201.0			30.7	121.7	41.0			
IIIB	13.8	30.0	42.6	57.5	87.0						39.4		41.0			
IIIC			40.3	82.0							50.6	145.0	59.6			
II + III	9.6	29.4	40.0	52.3	74.8	103.6	148.6	221.0	297.0		35.1	139.2	52.2			
III	12.0	21.6	42.9	53.8	74.1	109.2	131.9				38.3	114.8	49.4			
1400 - 2100 (29224 OBSERVATION HOURS)																
CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	15	6	6	3	5	1	2				35	3	38			
IIIA	3	4	2	1	2	5	4				12	11	23			
IIIB	3		1								4		4			
IIIC			1								1		1			
II + III	12	4	5	3	4	5	6	2	1	1	28	15	43			
III	3	3	1	2	4	3	1	1	1	1	9	9	18			
TOTAL TIME IN EACH DURATION HOURS AND TENTHS																
CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	2.6	2.3	3.7	3.0	6.2	1.9	6.8				17.8	6.7	24.6			
IIIA	.7	1.7	1.2	1.0	2.5	8.7	9.7				6.1	29.3	33.2			
IIIB	.8		.7								1.4		1.4			
IIIC			.7								.7		.7			
II + III	2.3	1.7	3.0	2.9	4.9	9.1	15.1	7.4	6.3	16.9	42.7	57.7				
III	.8	1.3	.7	2.5	7.1	7.1	7.7	4.9	6.3	9.2	25.9	31.1				
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS																
CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	10.3	23.3	37.3	59.3	73.8	112.0	144.0				30.5	133.3	38.6			
IIIA	12.3	29.3	37.0	59.0	73.0	104.0	148.8	299.0	375.0		30.6	160.0	86.6			
IIIB	19.0		40.0								21.3		21.3			
IIIC			39.0								39.0		39.0			
II + III	11.7	25.8	36.4	58.3	74.0	108.6	151.0	222.0	295.0	375.0	32.0	170.9	80.4			
III	19.0	29.7	40.0		74.5	109.8	193.0	295.0	375.0		34.6	172.4	103.9			
2200 - 0600 (32877 OBSERVATION HOURS)																
CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	121	95	49	31	31	16	10	5	2	1	327	34	361			
IIIA	45	34	18	14	17	11	10	6	3	1	128	38	181			
IIIB	5	3	3	1	1	1	3	1	1	1	17	7	26			
IIIC	1	1	1	1	1						4	1	5			
II + III	62	71	38	31	44	25	23	20	15	8	246	93	339			
III	26	27	15	17	16	13	10	8	9	2	101	39	140			
TOTAL TIME IN EACH DURATION HOURS AND TENTHS																
CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	20.4	37.8	31.0	28.0	37.6	27.7	24.6	17.9	9.9	6.3	156.7	83.9	240.6			
IIIA	8.5	14.3	11.3	12.7	21.6	19.6	24.9	21.0	24.0	6.3	68.6	89.9	130.9			
IIIB	.9	1.3	2.0	4.4	1.1	1.6	7.9	3.2	9.9	6.7	9.9	24.9	35.4			
IIIC	.2	.5	.7	4.2	1.2	2.8					2.1	2.8	4.3			
II + III	11.5	28.2	24.6	27.7	53.5	43.2	58.5	68.0	79.3	34.3	177.7	313.2	460.7			
III	9.5	11.4	9.5	19.2	20.2	23.2	24.0	27.9	13.4	9.2	61.8	123.0	184.8			
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS																
CATEGORY		TIME IN MINUTES												1-90 91-ALL 1-ALL		
1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL			
II	199	137	78	47	53	19	18	7	2	1	516	45	359			
IIIA	67	51	28	19	26	20	15	6	6	2	191	49	240			
IIIB	12	4	9	7	3	1	4	1	1	1	35	8	43			
IIIC	1	1	3	1	1	1					6	1	7			
II																

ATLANTA, ATLANTA  
TABLE XXI - TEMPERATURE > 32 DEGREES (F.) WITH FOG, NO PRECIPITATION, AND WIND 9-12 KNOTS.  
0700 - 1300 (23571 OBSERVATION HOURS) JANUARY 1956 - DECEMBER 1965

FREQUENCY OF OCCURRENCE												TIME IN MINUTES			
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	28	11	9	2	1			1				47	1	49	
IIIA	5	2	4	4	2			1	1			17	2	19	
IIIB	1	2	1		1							5			
IIIC															
II + III	26	10	7	5	4	1	1	1	1			52	2	55	
III	4	2	3	4	2			1				15	1	16	
TOTAL TIME IN EACH DURATION HOURS AND TENTHS															
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	4.7	4.0	3.1	2.0	1.3			4.0				19.0	4.0	19.0	
IIIA	1.9	2.9	2.6	3.8	2.4			2.3	4.0			8.6	0.3	12.0	
IIIB	0.9	0.9			1.1							2.9			
IIIC	0.8	1.6	1.6	1.6	0.8			1.6	4.0			22.9	8.2	31.1	
II + III	6.8	5.6	5	4.6	3.2	1.6	1.6	2.6	4.0			9.6	2.3	11.9	
III	1.5	1.8	1.1	3.7	2.3			2.3							
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS															
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	10.0	21.7	37.6	50.0	75.0			240.0				19.2	240.0	23.0	
IIIA	10.4	26.0	39.0	57.3	72.5			139.0	240.0			30.9	189.3	37.0	
IIIB	19.0	27.5	40.0		66.0							35.2			
IIIC	11.0	21.6	39.0	57.6	78.0	105.0	145.0	240.0				26.5	163.3	33.9	
II + III	10.5	27.5	41.3	54.8	68.0	139.0						38.4	139.0	44.7	
III															
1400 - 2100 (29234 OBSERVATION HOURS)															
FREQUENCY OF OCCURRENCE	TIME IN MINUTES												TIME IN MINUTES		
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	13	3	3	2	3							26			
IIIA	4	4	2	1	2							13			
IIIB	2											2			
IIIC															
II + III	13	3	3	4	2	1	1					23	2	27	
III	3	2	1	1	1							8			
TOTAL TIME IN EACH DURATION HOURS AND TENTHS															
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	2.2	2.1	2.0	1.9	3.6							11.7			
IIIA	0.8	1.7	1.5	1.0	2.8							0.2			
IIIB	0.5											0.5			
IIIC															
II + III	2.5	1.2	2.0	3.6	2.2	1.7	2.8					11.9	4.0	15.5	
III	0.7	0.8	0.8	0.9	1.5							4.7			
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS															
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	10.0	23.2	39.3	56.5	71.0							26.9			
IIIA	12.0	23.5	43.5	57.0	89.0							26.8			
IIIB	15.0											19.0			
IIIC															
II + III	11.3	24.0	40.3	56.5	66.5	100.0	140.0					27.6	120.0	34.5	
III	14.7	24.0	45.0	52.0	90.0							36.9			
2200 - 0600 (32877 OBSERVATION HOURS)															
FREQUENCY OF OCCURRENCE	TIME IN MINUTES												TIME IN MINUTES		
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	31	17	11	8	5	1	1					72	1	73	
IIIA	5	4	2	3	3	1						19	8	21	
IIIB	1											1			
IIIC												1			
II + III	31	18	9	11	7	2	4					75	6	82	
III	5	3	2	2	3	2	1					19	3	18	
TOTAL TIME IN EACH DURATION HOURS AND TENTHS															
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	9.2	6.9	7.0	7.4	6.3	1.6						33.0	1.9	36.9	
IIIA	1.1	1.7	1.4	2.9	6.6	1.9	9.0					12.6	4.9	17.5	
IIIB	0.3											3			
IIIC												0.6			
II + III	3.6	7.4	5.7	10.4	8.8	3.6	10.5					37.9	14.0	52.0	
III	1.2	1.3	1.4	2.0	3.8	3.8	3.8	9.0				9.6	6.8	16.4	
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS															
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	10.1	24.3	37.9	55.8	77.8	114.0						27.3	11.0	28.7	
IIIA	12.8	25.3	41.5	58.7	78.0	111.0	180.0					39.8	145.5	49.5	
IIIB	15.0											15.0			
IIIC												36.0			
II + III	10.9	24.6	38.0	56.9	75.6	107.0	157.0					29.9	140.3	38.0	
III	13.8	25.3	40.5	60.0	76.7	113.5	180.0					36.4	135.7	34.6	
ALL (19767 OBSERVATION HOURS)															
FREQUENCY OF OCCURRENCE	TIME IN MINUTES												TIME IN MINUTES		
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	72	33	19	12	9	1	1	1				163	2	147	
IIIA	14	8	6	7	1	1	2	1				41	4	45	
IIIB	4	2	1	1								9			
IIIC												1			
II + III	70	31	19	20	13	4	6	2	1			153	11	166	
III	12	7	6	7	6	2	2					38	4	42	
TOTAL TIME IN EACH DURATION HOURS AND TENTHS															
CATEGORY	1-15	16-30	31-45	46-60	61-90	91-120	121-180	181-240	241-360	361-480	481+	1-90	91-ALL	1-ALL	
II	12.1	19.0	12.1	11.3	11.2	1.7						39.7	3.9	55.6	
IIIA	10.1	23.7	36.1	56.6	75.2	114.0						26.6	11.2	32.3	
IIIB	13.7	25.0	41.2	57.7	79.1	111.0	199.5	240.0				33.7			
IIIC	1.0	0.9	1.7		1.1							0			
II + III	12.0	12.2	18.2	18.9	10.2	7.0	19.2	4.0				72.6	26.2	98.6	
III	2.6	3.0	4.8	6.5	7.0	3.0	3.0					23.9	9.1	33.0	
AVERAGE TIME IN EACH DURATION MINUTES AND TENTHS															
CATEGORY	1-15	16-30													